Expert Advice For the Automobile Owner

Queries and Replies Covering Matters of Importance to the Man Who Runs a Car

Of late I have been putting one gallon of coal oil to ten of gasoline in my tank and have found it satisfactory, but could that be the cause of the large amount of carbon in my engine? The carburetor is sufficiently heated by the hot air from the exhaust, and the intake manifold becomes so hot that it cannot be touched. There is a knock in each cylinder when the engine pulls hard with spark advanced.

You are driving with the spark advanced too far. Any motor will knock when pulling hard with the spark advanced, as you have stated. The spark lever should be retarded as the throttle is opened, but only enough to stop the motor knocking. If you will examine the interior of your motor you will probably find that there is not enough carbon to cause a knock. We would not advise mixing gasoline and kerosene; you are likely to have vaporizing troubles, as the kerosene is liable to be left in the carburetor. The kerosene will not vaporize as readily as the gasoline and in a short time your float chamber will be full of kerosene, and then the motor will be obliged to run on the latter until the float chamber is emptied, when it will be filled with the mixed fuel and the cycle will be repeated. This variation in the quality of the fuel will result in poor carburetion. The saving that results from adding such a small percentage of kerosene is not sufficient to make it worth the trouble.

My motor runs evenly when running empty, but when pulling along on high speed, with the motor throttled down, the front cylinder misses. I have done everything I know of to correct this. Can you suggest something?

Provided you are certain that it is the front cylinder, we would advise making a thorough inspection of the ignition. Examine the spark plug for small cracks and see that the points are about one-thirty-second inch apart. Look over the wiring to this plug once more for bare insulation and inspect the timer to see that proper contact is made. See that there are no air leaks around the manifold connection and be sure that the valves are not warped.

I have trouble in short circuiting. I have put on an all new magneto cable, but it goes through anywhere it happens to touch any metal. Can it be that the magneto is too strong?

The probable reason for the current leaking is that the insulation is not heavy enough, or it has become worn in places where it has rubbed against the metallic surfaces. Possibly the leak of current occurs at the point at which the wires pass through the fiber block over the exhaust manifold. It would also be well to note if this block is properly in place.

If a can of gasoline is exposed to the air long enough for a noticeable part of it to evaporate will the remaining gasoline be any weaker than it was at first?

When gasoline is exposed to the air and allowed to evaporate the specific gravity of the remainder of the liquid increases, and, while the fuel value remains about the same, it is harder to start a motor with it. Gasoline is a mixture of a great many petroleum oils differing slightly in their specific gravity, and when this mixture is allowed to evaporate slowly a greater proportion of the light oils is taken up by the atmosphere, and thus what is left becomes heavier and heavier, and as the specific gravity increases it makes starting harder.

Is there such a thing as a high compression or a low compression motor? If so, what is the advantage of a low compression motor?

Motors have been constructed with compression pressure varying all the way from nothing at all up to several hundred pounds. Roughly, motors with a compression of over seventy pounds are generally considered to have high compression and engines with less than fifty-five pounds low compression. Yet the terms are purely relative and have no exact meaning. A low compression motor will run slower and more smoothly at slow speed than a high compression one. It is not so likely to knock when the cylinders are carbonized, nor will it overheat so readily. The pressures generated are not as great, and therefore the parts do not need to be made so strong. The high compression engine, on the other hand, is more efficient and develops a greater power for a given piston displacement.

Which gives more power, a long or short stroke motor?

Within the limits found in ordinary practice the short and long stroke motor will develop the same power, provided the piston displacement and speed are respectively equal. Let us consider two four cylinder motors with three hundred-inch piston displacement. The long stroke motor has a small bore, and the explosion pressure acts on a piston of small area, but this is offset by the fact that the pressure acts throughout the long stroke. In the short stroke motor the explosion pressure acts on a piston of large area, and this compensates for the fact that the stroke is short. The advantage of the long stroke motor lies in the fact that for a given piston displacement it has a smaller bore than the short stroke motor, the pistons are smaller and lighter, and the motor may be run at a higher speed because light pistons and connecting rods do not vibrate as much as heavy ones, and it is by increasing the motor speed that the small bore, long stroke motor is made to give more power than the large bore, short stroke motor of the same size.

I think the radiator on my car is stopped up, as I have a great deal of trouble with the engine running hot. Have had the radiator cleaned, but get no better results. Would you advise me to take the radiator apart to clean it?

First of all, find out whether the radiator is at fault by removing the lower hose connection and then run water into the filler opening and note whether the water flows freely from the lower connection or whether the passage seems to be impeded and the water overflows from the top.

Your water jackets may be clogged with dirt, sand or scale, or your pump may have a broken shaft or vanes.

I have a valve in the head motor and find it necessary to have the carbon removed about every 200 miles. Is this excessive?

Your motor carbonizes much too quickly, but it is not due to the quality of the oil. Possibly you are using too light an oil; try a heavier one. It may be, also, that your pistons or rings are worn so that an excess of oil makes its way into the combustion chamber, or the oil level may be too high, or with certain types of force feed oilers it is possible that the feed should be cut down. See that the piston ring joints are not in alignment.

How can the weight over the front and rear axles be ascertained?

Drive the car over four scales so that each wheel rests upon one of them. The readings of the scales under the front wheels will give you the weight on the wheels, and the rear scale readings the rear weight. Thus if the front scales showed 400 pounds each the total over the wheels would be 800. By deducting the weight of the axles and wheels you have the weight over the axles.

When I open my throttle halfway and retard the spark for climbing the motor does not pull any better, but begins to knock. What is the matter?

The cause of the trouble lies in your feeding too much fuel to the motor. If your operation is otherwise all right your carburetor probably delivers too rich a mixture. The needle valve of the carburetor ought to be screwed down a little, trying the difference in operation after every small adjustment, until the correct one has been reached.

What is the cause of about half a pint of gasoline leaking from my carburetor out through the air pipe when the engine stops?

The leaking is probably due to the condensation of the heavy gas in the manifold. When the engine stops it runs out in the manifold and back through the carburetor. The use of an exhaust sleeve or drum around the exhaust manifold and a flexible tube running to the air bend in the carburetor will probably overcome this trouble. The height of the float should be one and a sixteenth inches from the top of the bowl to the top of the cord float when the valve is seated.

If two engines of the same make and model were set in the same frame, one ahead of the other, would the rear crank shaft be strong enough to stand the strain?

The rear crankshaft would have to be strong enough to transmit the horsepower of both motors. This would be especially true if the timing was so arranged that the power strokes of the two motors were synchronized so that the minimum stress from both motors fell upon the shaft at the same time. In such a case as you mention a heavier crankshaft should be installed in the rear motor.

My car smokes badly and has used one gallon of oil in 100 miles. It has a splash lubrication system. What is the trouble, and how can I remedy it?

When a splash system smokes the trouble can generally be put down to either too high a level in the splash trough, too deep dipping of the connecting rods or bad piston rings. The first two amount to practically the same thing, because if the level of the oil is too high the connecting rod is sure to dip too deeply into the oil, and hence the effect is to splash too much oil to the cylinders. When the piston rings are faulty the oil leaks past the rings, and after it reaches the combustion space is burned in large quantities, thereby causing the smoking and sooting. The proper course for you to pursue is first to determine the proper level in the crank case.

The trouble with your oiling system might be in the leakage of air in the vacuum tank which controls the supply to the crank case. If air leaks into the cap at the top the oil will flow out of the tank into the crank case, and the result will be such as you mention. Therefore see that the filler cap on top of the reservoir is absolutely airtight. If you will do this and also see that the oil level is not above the plug in the bottom your system will work all right.

Have the different makes of magnetos different material for breaker points than platinum, and, if so, what is it? Are there different grades of platinum points?

The so called platinum points for magnetos vary greatly in composition and hardness. Different compositions and percentages of iridium are used in the compositions, the average being somewhere about 15 per cent iridium or less. In some of the very cheap grades no platinum at all is used, nickel being substituted. These points do not stand up for any length of time.

Where platinum is used the only difference in actual grade is in the variation of the percentages of alloying substances used and also in the thickness of the points. In some cases the platinum is very thin.

My plate clutch slips. Tried washing it with kerosene, but with no results. Also had the crank case taken off, but t e no nuts to take up on. Have tried both kinds of oil, but have met with no success. What is the cause?

Probably the clutch is being held disengaged by the sticking of the pedal shaft in its bearing or other members of the operation mechanism are sticking due to lack of lubrication, thus not allowing the clutch to become fully engaged when the pressure is removed from the clutch pedal. If the mechanism is found to be in good shape the next cause would be insufficient pressure exerted on the plates. This might be caused by weak clutch springs or springs that have taken a permanent set after a few thousand miles of service.

Automobile manufacturers can test springs for their tension, and, while great care is exercised in the strength of the steel wire which goes into them and the heat treatment of the same, nevertheless occasionally springs will pass by inspector, no matter how rigid, that have not been carefully heat treated, and after some little service they will take a permanent set and fail to exert sufficient pressure on the plate to transmit the power.

The third and most likely cause is dirty and gummed plates due to neglecting to change the lubricating oil in the motor.

Getting the Dollar From Under the Stump

How Up to Date Farmers Are Easily and Economically Realizing on Land Hitherto Impossible of Cultivation.

ABOUT 400,000,000 acres of land included in farms throughout the United States are unimproved. Figuring that each acre could be made to produce at least $25 worth of produce per year, there is approximately $10,000,000,000 production being lost annually. Quite a tidy figure. And when we take into consideration that in many cases it requires only the removal of sundry stumps and boulders to make this land profitable, it certainly looks as though something might be done to save the waste. "Stumping with dynamite" is both an economical, quick and labor saving method as well as one that is growing in popularity daily.

The method involved in the blasting of a stump is to confine a quantity of explosive in such a manner that when exploded the expanding gases will lift the stump out of the ground. To secure best results the charge should be placed in the soil well under the base of the stump at the point where the resistance offered to the force of the explosion will be equal on all sides.

Where the soil is of a heavy clay or plastic nature a slow acting powder is preferable, such as farm powder or stumping powder. Where the earth is sandy or loose and is apt to permit the easy escape of gases a fast explosive, such as 40 to 60 per cent dynamite should be used. The condition of the soil with respect to moisture also has a great influence upon the amount of work that a certain quantity of powder will do. After heavy rains when the soil is saturated to the base of the stump and the subsoil is just damp is a most favorable condition.

No set rules as to the amount of powder necessary to blast a certain kind or size of stump can be given, since different conditions govern all cases. Two stumps of the same size, kind and age of cut, when one is grown on well drained soil where the roots must penetrate a great depth for water and the other is grown on soil where there is always water near the surface, will demand different treatment for extraction. The older stumps, especially if from timber free from resin, require less powder. The exact amount necessary for set conditions can, however, be readily determined with a little experimenting.

Few tools and supplies are required. A one and one-half inch wood auger with a shank about four and one-half feet long, a medium sized crowbar, a round pointed shovel and a wooden tamping stick, together with the powder, fuse and caps, will serve to fill the bill.

THE YOLK OF AN EGG.

It Is Good Predigested Food, While the White Is Not.

It has long been known that many persons cannot eat even perfectly fresh eggs without suffering all the symptoms of violent poisoning.

The egg has two parts—the yolk inside and the white outside. The white is the part of the egg that the chicken is made of—the part that makes the bones, the feathers and the flesh. The yolk, however, is what the chicken lives on. It is a dinner basket placed there by nature for the infant chicken. It is a little lunch put up for the young life within the egg to support it until it gets out of the shell, for the chicken must eat inside the shell as well as outside, and the yolk is a little bundle of predigested food that nature has prepared for the chicken to eat before it emerges into the world.

Thus we see that the yolk is food, whereas the white of the egg never was intended to be eaten. Really it is not fit to be eaten. It has some food value, it is true. It can be utilized under some circumstances, but it is not good food. The yolk is the only part of the egg that really is wholesome food. It is digested very quickly, too, recent investigations showing that the yolk is digested entirely in the stomach. There is some fat in the yolk, there is some protein in the yolk and some carbohydrate in the yolk, and all are digested in the stomach.

The fat of the yolk is of a peculiar kind. It is more readily digested in the stomach than any other fat, although other emulsified fats are also to some degree digested in the stomach.—Dr. J. H. Kellogg in Good Health

CURIOUS PENALTIES.

Some That Were Inflicted In the Early Days In New York.

When New York, or as it was then called, New Amsterdam, was under Dutch rule, some peculiar penalties were enacted. In 1642 a defendant in an action for slander was sentenced "to throw something in the box for the poor." In 1644 Thomas Connel, a soldier, was tried for desertion and sentenced "to be conveyed to the place of execution, and there fastened to a stake and a ball fired over his head, as an example to other evildoers."

In 1647 Jonas Jonassen, a soldier, for robbing hen roosts and killing a pig was ordered "to ride a wooden horse three days, from 2 p. m. to the conclusion of the parade, with a fifty pound weight tied to each foot." In 1648 an Englishman found guilty of a grave offense was pardoned on condition that he saw firewood for one year for the West India company.

In the time of the commonwealth, in England, drunkards at Newcastle-on-Tyne were sentenced to carry about a tub, with holes in the sides for the arms to pass through. In 1754, in Scotland, David Leyes, for striking his father, was compelled to appear before the congregation at church, "bairheddit and bairfuttit," with a paper above his head inscribed with large letters, "Behold the onnatumall son, punished for putting hand on his father, and dishonoring God in him."—Exchange.

INCENDIARY BOMBS.

Terrific Heat of Thermite, the Stuff With Which They Are Filled.

Incendiary bombs are one of the most fearful engines of modern warfare. The reason they throw out such a terrific heat is because they are filled with thermite.

Thermite is so hot when it is fired that it will melt iron and steel with the greatest ease and even burn its way through granite.

This marvelous substance was discovered in 1902. It is really a mixture of coarsely powdered aluminum and oxide of iron. It can't be fired by itself, but has to be started by another mixture consisting of finely powdered aluminum and barium peroxide.

The wonderful heating power of this terrible substance has been made use of all over the world in iron and steel welding. Steel joints are welded solidly together in a few moments by placing a little thermite round the joint and firing it.

The thermite mixture is as safe to handle or store as sawdust—safer, in fact. Only the special mixture or a very high temperature indeed will set it on fire. If necessary the two substances from which thermite is made can be taken separately and mixed when required, and there is no danger whatever in aluminum powder or oxide of iron, which is, practically speaking, iron rust, yet the mixture makes up one of the hottest substances known.—Pearson's Weekly.

When you begin to notice a man's name in the financial columns of the newspapers, it is time to look for his wife's name in the society columns.

...ed.

Frank lives in Eastern avenue. A few days ago his companion George caught his clothing on a picket fence. He was held fast, his feet a foot or two from the ground. He pleaded with Frank to release him or run for help, but Frank refused.

"Why don't you go and help George?" his mother inquired from the front porch.

"I'm just too tired," said Frank. "Yesterday I wanted him to 'shoo' my dog out of his yard, and he wouldn't do it 'cause he said he was tired. I'm just as tired as he was."—Indianapolis News.

Proof Against Wasp Stings.

A Scottish naturalist in a paper on the habits of wasps tells how a blackbird will stand at the side of a hanging wasps' nest and deliberately tear it in pieces in order to get at the larvae, apparently undisturbed by the swarm of angry insects, whose vicious stings instantly put to flight the human curiosity seeker who ventures near to watch the demolition.

NOTICE FOR PUBLICATION.

Department of the Interior.

U. S. LAND OEFICE at Gainesville, Florida, October 23rd, 1915.

Notice is hereby given that Julia Sutton, widow of Fred J. Sutton, Deceased, of Palatka, Florida, Box 12, R. F. D. No. 1, who, on January 7, 1910, made Homestead Entry, No. 06260, for North half of Lot 3, Section 36, Township 9 South, Range 25 East, Tallahassee Meridian, has filed notice of intention to make Five-year proof, to establish claim to the land above described, before Clerk of Circuit Court, at Palatka, Florida, on the 9th day of December, 1915.

Claimant names as witnesses:

W. A. Williams, of Palatka, Florida, R.F.D. No. 1.

L. M. Upchurch, of Palatka, Florida, R.F.D. No. 1.

J. W. Cannon, Jr., of Palatka, Florida, R. F. D. No. 1.

J. D. Johns, of Palatka, Florida, R. F. D. No. 1.

ROBT. W. DAVIS, Register

ADMINISTRATOR'S NOTICE.

All creditors, legatees, distributees, and all persons having claims or demands against the ESTATE of Samuel J. Kennerly, deceased, are hereby notified to present their claims or demands to me within Two Years; and all persons indebted to said Samuel J. Kennerly, deceased, are notified to pay the same immediately.

LEILA A. KENNERLY, Administratrix of the estate of Samuel J. Kennerly, deceased.

This 19th day of Oct., A. D. 1915.

EXECUTOR'S NOTICE.

All creditors, legatees, distributees, and all persons having claims or demands against the ESTATE of A. B. Purdom, deceased, are hereby notified to present their claims or demands to me within Two Years; and all persons indebted to said A. B. Purdom, deceased, are notified to pay the same immediately.

MAY H. PURDOM, Executrix of the last will of A. B. Purdom, deceased.

This 18th day of Oct., A. D. 1915.

SPECIAL MASTER'S SALE.

Notice is hereby given that under and by virtue of a decree of foreclosure and sale rendered in the Circuit Court of the Eighth Judicial Circuit of Florida, in and for Putnam County, by the Hon. J. T. Wills, Judge of said Court, dated the 19th day of May, A. D. 1914, wherein W. H. Cole is complainant, and Vanda Jefferson and his wife Josephine Jefferson, are defendants, and wherein the undersigned was appointed Special Master in Chancery to sell the property herein-after described, I shall offer for sale at public auction for cash to the highest and best bidder, at the front door of he Court House in the City of Palatka, Putnam County, Florida, on the FIRST MONDAY IN NOVEMBER, A. D. 1915, the same being the first day of said month, during the legal hours of sale on that day, the following described property, being the same property mentioned and described in the bill of complaint herein and lying and being in said Putnam County, Florida, to-wit:

Beginning at the Northwest corner of Lot 4 in Section 34, Township 9, South of Range 24 East, and running thence South 56 degrees East 190 feet to corner of right of way 30 feet wide, reserved by O. H. Ewing; running hence North along line of said right of way 30 feet North on South line of property of said Ewing, and 19 degrees North of East 665 feet to a stake; thence North 1120 feet along West line 30 feet wide right of way to water edge of Lake Grandin; thence Westerly along the edge of Lake Grandin about 900 feet to a stake; thence South 400 feet to a stake; thence West 33 feet to a stake; thence South 560 feet to a point of beginning, containing sixteen acres more or less, and being the same land deeded to Josephine Jefferson by O. H. Ewing and Emma V. Ewing, his wife, by deed dated March 20, 1909, and recorded in Book 52, page 595 of the Public Records of Putnam County, Florida.

A. H. ODOM, Special Master in Chancery.

Morgan F. Jones, and Hilburn & Merryday, Solicitors for Complainant.

Notice of Application for Tax Deed Under Section 8 of Chapter 4888, Laws of Florida.

NOTICE is hereby given that R. C. Burce purchaser of Tax Certificate No. 81, dated the 4th day of July A. D., 1910 has filed said certificate in my office and has made application for tax deed to issue in accordance with law.

Said certificate embraces the following described property, situated in Putnam county, Florida, to-wit:

Cen. 10 a. of W½ of Sw¼ of Ne¼, Section 27, Township 10, S. Range 24 E., 10 Acres.

The said land being assessed at the date of issuance of such certificate in the name of F. W. Coneing.

Unless said certificate shall be redeemed according to law, tax deed will issue thereon on the 8th day of November A. D., 1915.

Witness my official signature and seal this the 8th day of October A. D., 1915.

(SEAL) HENRY HUTCHINSON Clerk Circuit Court, Putnam Co., Fla. By H. Hutchinson, Jr., D. C.